## Amendments to the Specification

Please replace the paragraph on page 9, lines 4-11 with the following amended paragraph:

Ends of excitation coil 26 constitute terminals (60) to which excitation leads 62 are coupled. In the illustrated embodiment, excitation leads 62 are wires extending between terminals (60) of excitation coil 26 and excitation signal supply 28. Excitation wires 62 extend through flux path closure device 24 between top surface 44 and bottom surface 45. Illustratively, excitation coil 26 is attached to flux path closure device 24, or to spacer 50 attached to flux path closure device 124, by gluing. Other means of attachment of excitation coil 26 to flux path closure device 24 or spacer 50 are within the scope of the disclosure.

Please replace the paragraph on page 11, lines 4-18 with the following amended paragraph:

In accordance with one illustrative method of evaluating magnetic performance 600 of a magnetic component, as shown in FIG. 6, a closed flux path 23 is created 604 through the flux path closure device 24 and the magnetic component 22 by coupling the provided closure device and component 606. A transient signal is generated by signal source 28 to excite 608 a coil 26 to generate magnetic flux in the closed flux path 23. The current through the coil 26 and the voltage across the coil terminals (60) are measured 610 during the duration of the transient signal. An effective resistance for the coil 26 is calculated 612 based upon the current and voltage measurements taken during the transient signal. The transient signal also generates magnetic flux through

the closed flux path 23. The current through the coil 23 and the voltage across the coil terminals (60) is measured during the duration of the transient signal. Flux is calculated 614 at a number of points throughout the transient event using the measured current and voltage data and the calculated effective resistance. Plots of flux versus time during the transient signal and a hysteresis curve of flux vs. current are generated 616 and analyzed to evaluate the magnetic performance of the magnetic component.

Please replace the paragraph on page 11, line 28 - page 12, line 8 with the following amended paragraph:

Flux $\varphi(t)$ is calculated by the formula:

$$\varphi(t) = \int \frac{(V - iR)}{N} dt ,$$

where R is the electrical resistance of the coil and N is the number of turns in the coil. Typically, the resistance of the coil is assumed to be a known fixed value. However, the dependency of resistance upon temperature (both ambient and coil temperature which increases with current flow) is well documented. Other factors may also affect the resistance of the coil. Therefore, to obtain a more accurate value of the coil resistance, measurements are taken from which the effective resistance of the coil is calculated. In a preferred embodiment, a transient current signal is applied to the coil, producing a transient voltage across the terminals (60) of the coil and a transient magnetic flux.